

IN THE SPECIFICATION

Please amend the specification paragraph beginning at page 1, line 14 and ending at page 1, line 29 as follows:

Microorganisms, bacteria, mold, algae, etc. grow in industrial water such as cooling water, wastewater, emulsifiers used in the textile industry, etc. and have a deteriorating ~~effective~~effect on the operations of industrial processes. Such microorganisms propagate using organisms contained in the industrial water as a nutrient source and secrete polysaccharides. Varieties of organic and inorganic substances combined with these secreted polysaccharides and form viscous lumps or masses also called slime. Organic materials such as cellulose, hemicellulose, and the fibrin of white water in paper industry in particular provide ~~to have~~ sufficient nutrient sources for such microorganisms. The slime formed at areas of low fluid flow in a paper processing ~~process~~plant results in both direct and indirect losses, such as manufacturing time loss, equipment efficiency deterioration, etc. due to the deterioration of pulp quality, etc. Furthermore, the growth of microorganisms at such places like a cooling water facility, where much water is contained or recirculated causes a fouling phenomena.

This deteriorates heat transfer efficiency in an industrial cooling tower, as well as corrodes metal or erodes wooden parts..

Please amend the specification paragraph beginning at page 2, line 8 and ending at page 2, line 17 as follows:

Algae, ~~such as~~ a eukaryote, can propagate by photosynthesizing under an environment with light, air, and a small amount of organisms, ~~and~~ carbohydrate. Carbohydrate formed from algae is used as a nutrient source for other microorganisms such as bacteria and fungi, thereby accelerating the fouling phenomena. Algal fouling due to algae propagation is intensified at places that are exposed to sunlight, particularly in cooling water facilities, swimming pools, etc. This phenomena results in clogging which blocks water pipes, as well as the deterioration of heat transfer efficiency, oxidization of metal surfaces by the generation of oxygen, and the promotion of corrosion at a—holes on metallic surfaces through a partial galvanic reaction when the organism dies.

Please amend the specification paragraph beginning at page 2, line 18 and ending at page 2, line 28 as follows:

Various biocides are being developed in order to kill such microorganisms, fungi, algae, etc. or to prevent their surface adhesion to metal, etc. These biocides are generally divided into oxidant biocides and non-oxidant biocides. The oxidant biocides that are mainly used are halogen compounds such as chlorine, bromine, etc. that are popular due to their economic advantage of strong oxidation capability and low price. However, they can cause erosion of the wooden parts of cooling towers and metallic decomposition, and their sterilizing efficiency tends to deteriorate as they can be easily ~~being~~-discharged into the atmosphere. Furthermore, their practical effectiveness is poor due to their peculiar way of first reacting with secreted polysaccharides before they react with microorganisms that are the actual sources of biofilm formation.